

**Two New Species of *Ptecticus* with a Key to Species
Occurring in America North of Mexico¹**
(Diptera : Stratiomyidae)

M. W. McFADDEN

*Department of Entomology, Washington State University,
Pullman 99163*

In revising the Stratiomyidae of Mexico it was necessary to compare specimens of *Ptecticus sackenii* Williston from localities in Mexico with specimens from various localities in the United States. While making these comparisons I found two species from Arizona which possess a dark frons as does *P. sackenii* but differ in several other characters, notably male genitalia. These species, *P. melanothorax* and *P. nigritarsis*, are described for the first time and bring the total number of species of *Ptecticus* occurring in America north of Mexico to four. A key is provided to distinguish between the species and a lectotype is designated for *P. sackenii* Williston.

SYSTEMATIC TREATMENT

James (1935) first reviewed the genus *Ptecticus* as part of a larger work on the Geosarginae (= Sarginae) and followed a similar procedure in a later review (James, 1941). Notes on biology and a description of the larva of *P. trivittatus* (Say) was provided by McFadden (1967).

DIAGNOSIS.—The genus includes those species of Sarginae that have the second antennal segment extending deeply on the inner side into the third. The vertex is broader than the front and the eyes of both sexes are dichoptic but more so in the female than in the male. The lower squamae are simple and lack the strap-like lobe of *Chrysochroma* (of authors, not Williston). The American species formerly referred to *Chrysochroma* are not congeneric and a new name has been proposed for them in another paper (McFadden, 1970).

KEY TO THE SPECIES OF PTECTICUS IN AMERICA NORTH OF MEXICO

- | | |
|---|--------------------------|
| 1. Frons shining black | 2 |
| Frons yellow | <i>trivittatus</i> (Say) |
| 2. Mesonotum, scutellum and postscutellum orange-yellow | 3 |

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Mesonotum, scutellum and postscutellum dark metallic purple
 *melanothorax* McFadden, n. sp.

3. Posterior legs with apical four tarsomeres white; first abdominal tergum
 entirely yellow *sackenii* Williston
 Posterior legs with at least apical tarsomere black; first abdominal tergum
 with a dark metallic mark *nigritarsis* McFadden, n. sp.

PTECTICUS TRIVITTATUS (Say)

(Figs. 1, 4)

Sargus trivittatus Say, 1829, p. 159, Indiana; type presumed lost.

DIAGNOSIS.—An entirely pale species that can be separated from each of the other three species that occur in America north of Mexico by the yellow frons and by the distinct male genitalia (Fig. 4).

DISTRIBUTION.—Insufficient collecting data still prevent accurate definition of the range of this species but probably it extends from the Rocky Mountains to the Atlantic coast and from Florida northward to the southern tier of Ontario counties in Canada (Fig. 1).

DISCUSSION.—*Ptecticus trivittatus* is the most commonly collected form that occurs in this area and during the hot summer months adults can often be seen frequenting garbage or other decomposing organic matter. Additional information on the biology of *P. trivittatus* and illustrations of the mature larvae are given in an earlier publication (McFadden, 1967).

PTECTICUS SACKENII Williston

(Figs. 2, 3)

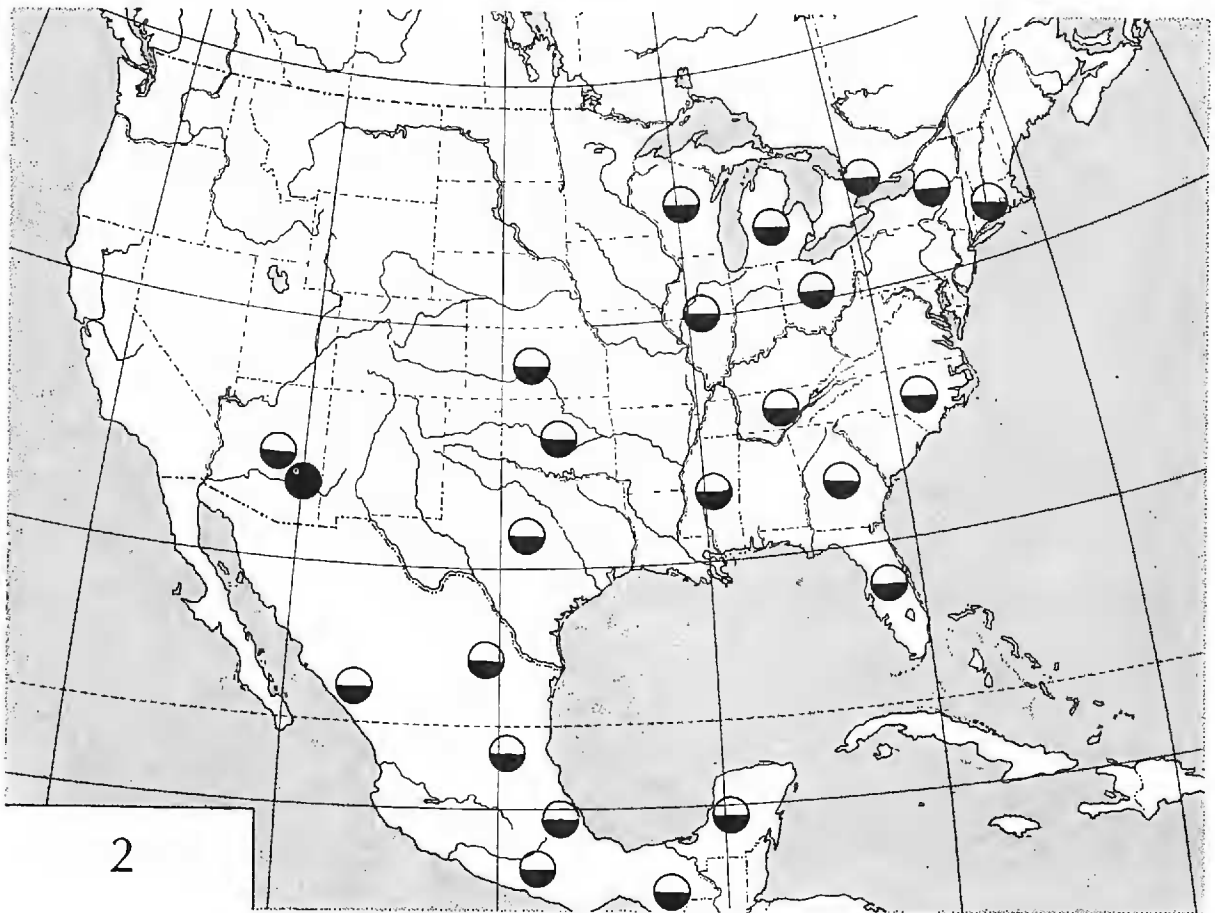
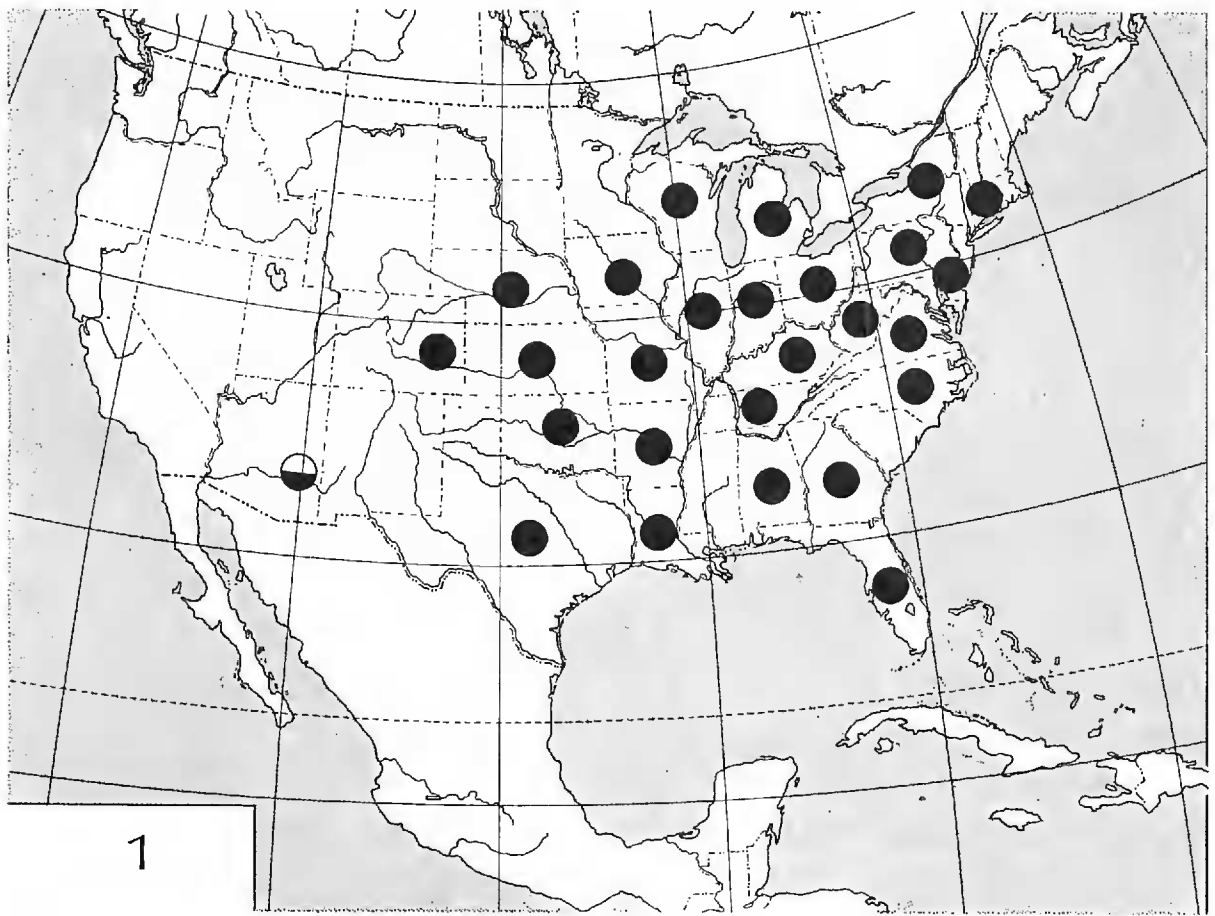
Ptecticus sackenii Williston, 1885, p. 124. Originally described from 4 specimens, 1 male and 3 females, all designated as cotypes by Williston. By present designation: LECTOTYPE: ♂ syntype, Shark River, New Jersey. PARALECTOTYPES: 1 ♀, New York; 1 ♀, Florida, Ft. George, August 1882.

All lectotype material is deposited in the Snow Entomological Museum, University of Kansas, Lawrence.

DIAGNOSIS.—Male genitalia, especially the cerci (Fig. 3), and the white apical four tarsomeres on the posterior legs will distinguish this species from the other two species that have the black frons.

DISTRIBUTION.—From Arizona east to the Atlantic coast, northward to Kansas west of the Mississippi River and as far north as southern Ontario east of the Mississippi (Fig. 2). The range also extends deeply into Mexico.

DISCUSSION.—The range occupied by *P. sackenii* is similar to that of *P. trivittatus* and, in fact, the two species are almost wholly sym-



patric. While *P. trivittatus* is commonly collected throughout its range, however, specimens of *P. sackenii* are rather rare and the species is poorly represented in most collections.

***Ptecticus melanothorax* McFadden, new species**

(Figs. 1, 5)

TYPE MATERIAL.—*Holotype male*, S.W.R.S., 5 MI. W. PORTAL, COCHISE COUNTY, ARIZONA, 28 August 1963, Evans, 5,400 ft. Allotype, same data as type. Type and allotype deposited in American Museum of Natural History. One male and one female paratopotype, same data as type, deposited in Washington State University Collection.

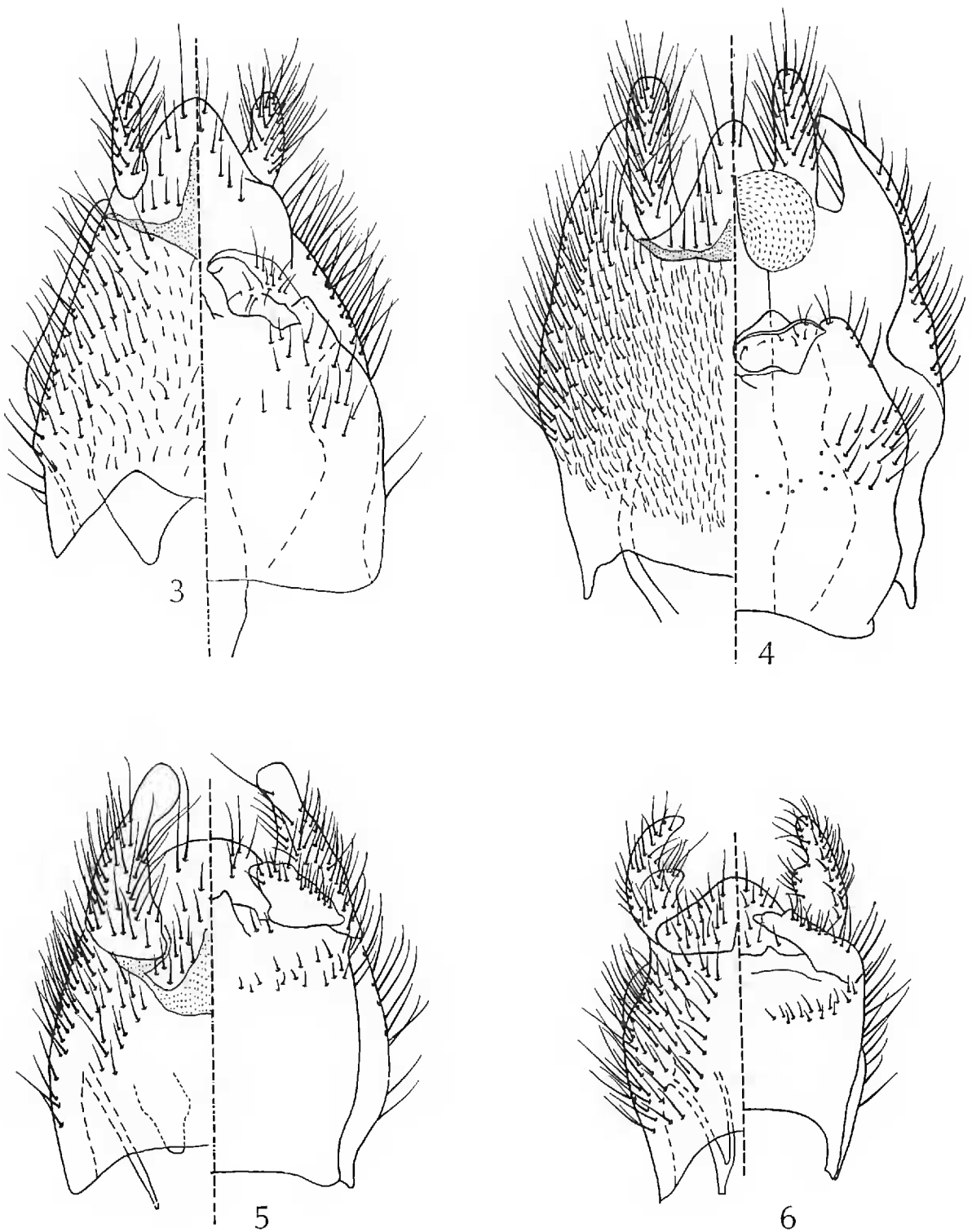
DIAGNOSIS.—Differing from other species of *Ptecticus* by having the mesonotum, scutellum and postscutellum dark metallic blue-black.

HOLOTYPE MALE.—Length 10 mm. Ocellar triangle and frons above tubercle black; tubercle, face and proboscis yellow; pile of frons brownish-yellow, that of vertex pale; pile of face and lower occipital orbit pale; antennae yellow, arista brownish yellow basally, darker at apex; pile of first and second antennal segments pale, except for a small posterolateral group of strong black hairs at distal margin of each segment as viewed from below. Thorax metallic blue-black over most of dorsal surface, becoming progressively lighter toward lateral line where it is yellow; humeri and a broad line along notopleural suture, white; postalar callosities reddish yellow; scutellum and postscutellum entirely dark metallic except an indistinct pale area on latter directly beneath apex of scutellum; pile of thorax pale, short and semi-appressed without overlap; pleura and pectus yellow. Wings subhyaline, stigma yellow. Halteres yellow. Legs yellow except for following black areas: tarsi of anterior legs, basitarsi and apical tarsomeres of posterior legs. Abdomen metallic blue-black with yellow areas as follows: a small spot at posterolateral margin of first tergum; second tergum with posterior transverse band, width less than half the length of that segment; a similar band on third tergum about equal to half the length of that segment; fourth tergum with dark area reduced to an indistinct mark near anterior margin, but separated from it by a narrow band of yellow; fifth tergum with a similar mark, but area further reduced; venter of abdomen yellow, except for first ventrite which appears somewhat darker. Male genitalia as in Fig. 5.

ALLOTYPE FEMALE.—Length 10 mm. Similar to male except for the following characters and usual sexual differences: arista black basally; scutellum with a narrow but distinct pale apical margin; posterior tibiae dark brown; posterolateral yellow spot on first abdominal tergum also present on anterolateral corner of second abdominal tergum; width of transverse yellow band on second abdominal tergum about half as long as segment; remaining abdominal terga

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FIG. 1. Distribution of *P. sackenii* (half-filled circles) and *P. nigritarsis* (filled circles) in North America. FIG. 2. Distribution of *P. trivittatus* (filled circles) and *P. melanothorax* (half-filled circles) in America north of Mexico.



FIGS. 3-6. Male genitalia of *Ptecticus*. (Right half = ventral view; left half dorsal view). FIG. 3. *P. sackenii*. FIG. 4. *P. trivittatus*. FIG. 5. *P. melanothorax*. FIG. 6. *P. nigritarsis*.

entirely reddish yellow or brown; first abdominal ventrite darker than in male. Cerci metallic blue-black with pale pile.

VARIATION FROM TYPE.—Male paratopotype with first two tarsomeres yellow on anterior legs and apical two tarsomeres brownish on middle pair; posterior tibiae notably darker than femora in both specimens; abdominal markings variable in male. Dark metallic areas on fourth and fifth terga reduced to small

indefinite linear markings on male paratopotype. Female paratopotype as follows: black of anterior tarsomeres extended to midpoint of tibiae, especially prominent on inner surface of tibiae; abdominal markings similar in both specimens except for three small indefinite dark metallic spots on anterior half of third tergum, two spots located near anterolateral margin, third about midway between outer two.

***Ptecticus nigritarsis* McFadden, new species**

(Figs. 2, 6)

TYPE MATERIAL.—*Holotype male*, S.W.R.S., 5 MI. W. PORTAL, COCHISE COUNTY, ARIZONA, 28 August 1963, Evans, 5,400 ft. Allotype, same data as type. Type and allotype deposited in American Museum of Natural History. One male and one female paratopotype, same data as type, deposited in Washington State University Collection. A female paratype from New Mexico (Post Office Cyn., Hidalgo Co., 12 August 1967, E. I. Schlinger) in the University of California at Riverside Collection.

DIAGNOSIS.—Similar to *P. sackenii* but easily distinguished by the color of the apical four tarsomeres on the posterior legs.

HOLOTYPE MALE.—Length, 7 mm. Ocellar triangle and frons above frontal tubercle shining black; tubercle, face and proboscis yellow; pile of head pale; antennae yellow; arista yellow basally, dark brown apically; pile of first and second antennal segments yellow except for a few black hairs along distal margin on outer surface of second segment. Thorax brownish yellow with erect pale pile; pleurae and pectus yellow. Wings subhyaline, stigma only slightly yellow. Halteres yellow. Legs yellow except for following black areas: apical two tarsomeres of anterior and middle legs, basitarsi, apex of fourth and all of fifth tarsomeres of posterior legs. Abdomen yellow, metallic blue-black areas as follows: most of dorsal surface of first tergum but not at lateral margins, lighter at posterior margin; second, third and fourth terga with dark area restricted to anterior half except for second tergum which may have a median posterior elongation; fifth tergum with dark area more extensive, occupying about four fifths of dorsum. Venter of abdomen entirely yellow. Pile of abdomen short, the color matching ground color. Genital capsule yellow, genitalia as in Fig. 6.

ALLOTYPE FEMALE.—Length, 9 mm. Similar to male except for the following characters and usual sexual differences: black hairs on second antennal segment absent; most of second and all remaining tarsomeres black on anterior legs; apical three tarsomeres of middle legs black and basitarsi and apical portion of fourth tarsomere black on posterior legs. Abdomen yellow with following dark areas: first tergum with a rectangular mark about four-fifths length of that segment, posterior margin yellow; second, third and fourth terga with a pair of anterior spots; fifth tergum with a median transverse band; venter of abdomen entirely yellow; color of abdominal pile corresponding to ground color; basicercus yellow, disticercus brown.

VARIATION FROM TYPE.—Restricted to color characters of legs and abdomen. Male paratopotype with all tarsomeres except basitarsi, black, or at least dark brown, on anterior and middle legs; posterior basitarsi not as dark as type but

still contrasting with white second and third tarsomeres; dark areas of abdominal terga similar to type but somewhat more extensive. No significant variation noted in female paratopotype, but female paratype with black of posterior legs restricted to basitarsi and fifth tarsomere.

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APPENDIX

Since this paper was written, two male specimens representing a third new species from Arizona have been found. The new species has a yellow frons and will come out to *P. trivittatus* in my key to species. It can be distinguished from *P. trivittatus*, however, by the greatly elongated, pincer-like cerci on the male genitalia.

A complete description of this new species will be included in a forthcoming paper on the *Ptecticus figlinus* complex which is currently in preparation.

BOOK REVIEW

DIRECTORY OF COLEOPTERA COLLECTIONS OF NORTH AMERICA (CANADA THROUGH PANAMA). Written, compiled and edited by Ross H. Arnett, Jr., and G. Allan Samuelson, assisted by Gerard E. Flory, Edward C. Mignot, C. Dietrich Schaaf, Eric H. Smith. Department of Entomology, Center for the Study of Coleoptera, Purdue University, Lafayette, Indiana 47907. viii + 123 pp. 1969. \$3.95.

The authors had an eye on the future in preparing this book. The data are arranged for a punch card coding and retrieval system, and are actually on IBM cards at the Center for the Study of Coleoptera. After chapters on the directory and on the storage and retrieval of information from insect specimens, the listings are by countries, and by political divisions of the countries. There is a list of abbreviations of collection names (pp. 106-114), an index of scientific names (115-116), and an index to personnel (117-122).—HUGH B. LEECH, *California Academy of Sciences, San Francisco*.